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November 14, 2002

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
TW-A325-Lobby  
Washington, D.C. 20554

Dear Ms. Dortch:

**Memorandum of Ex Parte Communication**

Re: **CC Docket No. 01-338. Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers**

**CC Docket No. 96-98. Implementation of the Local Competition Provisions in the Telecommunications Act of 1996**

**CC Docket No. 98-147. Deployment of Wireline Services Offering Advanced Telecommunications Capability**

On November 13, 2002, SBC representatives met with Christopher Libertelli, Chairman Powell's Legal Advisor regarding the network impacts of combining UNE loops with special access transport. Participating on behalf of SBC were Chris Rice (Senior Vice President – Network Planning and Engineering), Andre Fuetsch (Vice President- Network Planning), Jim Smith (Senior Vice President - FCC) and Gary Phillips (General Attorney and Assistant General Counsel).

SBC explained that the provisioning of unbundled voice grade DS0 loops combined with special access transport should be implemented pursuant to rational network engineering concepts. Specifically, SBC described why it is reasonable, efficient and practical for CLECs to purchase loop concentration equipment for use in their network. However, if an ILEC should deploy new equipment to support UNE-USA, then the ILEC should be able to recover costs up-front. The attached materials were distributed during the meeting.

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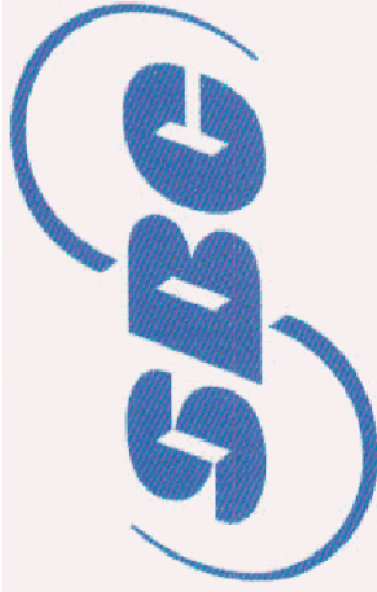
We are submitting the original and one copy of this Memorandum to the Secretary in accordance with Section 1.12 of the Commission's rules. Please include a copy of this submission in the record of the above-listed proceedings. Also, please stamp and return the provided copy to confirm your receipt. You may contact me at (202) 326-8889 should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Jay Bennis". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Attachment

CC: C. Libertelli



## **UNE-Loop/Special Access Network Impact Overview**

November 13, 2002

## *Overview*

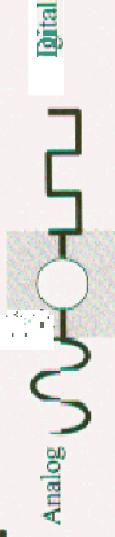
- **Provisioning of unbundled voice grade DS0 loops combined with special access transport should be implemented pursuant to rational network engineering concepts.**
- **There are costly, uneconomic ways to provision DS0 UNE loops combined with special access and there are rationale and efficient means to do so.**
- **SBC's presentation will discuss fundamental concepts involved in building efficient networks and will provide the Commission with workable alternatives for CLECs providing service utilizing their own equipment.**

## ***Fundamental Concepts***

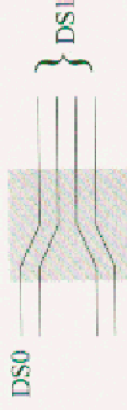
- Distances and number of lines **served** within a **central office** are variable factors in the **building** of efficient voice **networks**.
- Efficient voice networks employ concentration and multiplexing as close to the end-user as **economically feasible**.
- **CLEC collocation** in ILEC central offices provides the opportunity for CLECs to build efficient and economic facility-based networks with equal access to UNE Loops.
- Alternative forms of **loop** access considered by the Commission should **recognize** these elements and **provide** the **industry** with incentives to invest and build efficient **networks**.

# Network Fundamentals

- **A/D Conversion:** The mass market is served by analog phone sets. Most switches are digital. Therefore, a conversion from analog to digital is necessary.



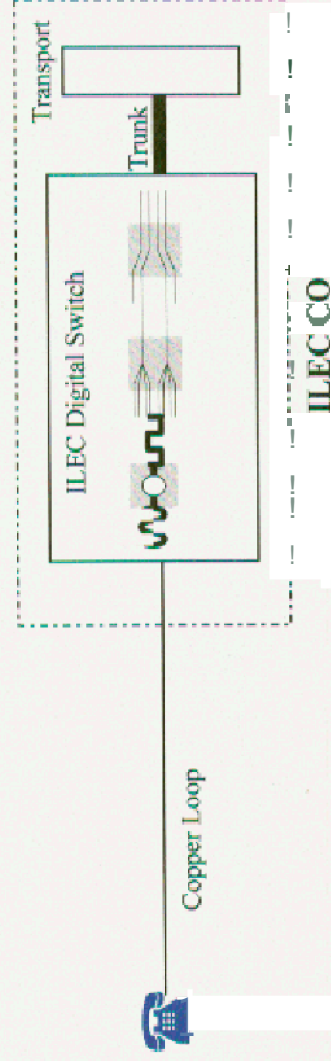
- **Multiplexing:** Allows multiple signals to be aggregated and transported across a single copper or fiber facility.



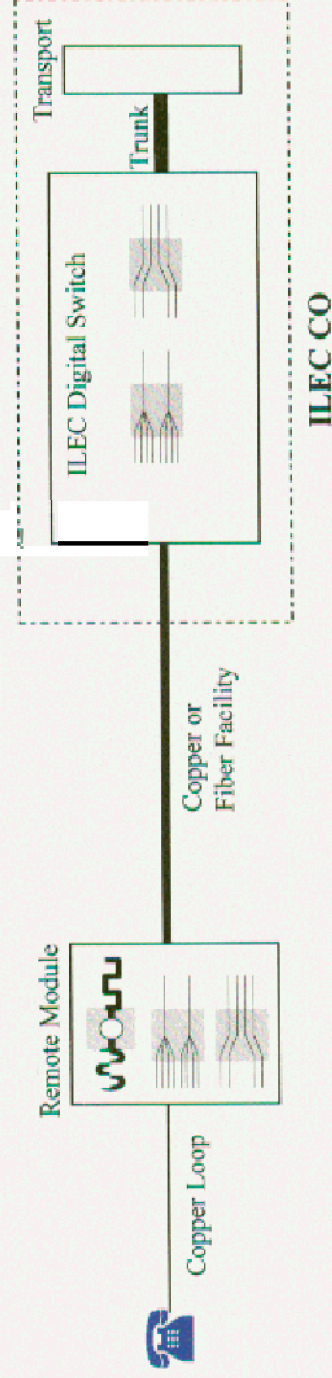
- **Concentration:** Allows “over-subscription” on either analog or multiplexed circuits. It is different from multiplexing. Different technologies allow different forms of over-subscription.



*Loops 18Kft or less: A/D conversion, concentration and multiplexing performed by switch:*



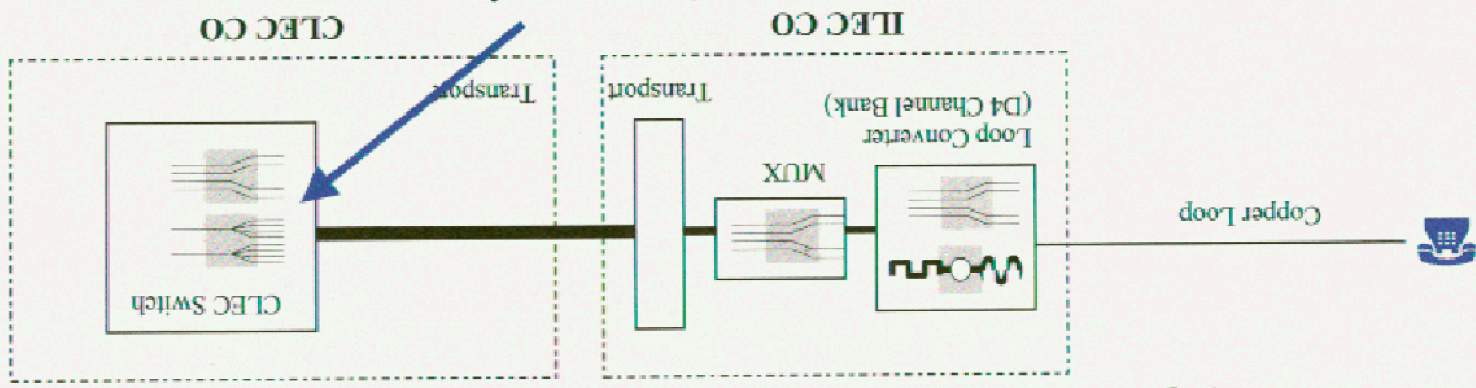
*Longer loops require placing A/D conversion, concentration and multiplexing closer to the end-user:*



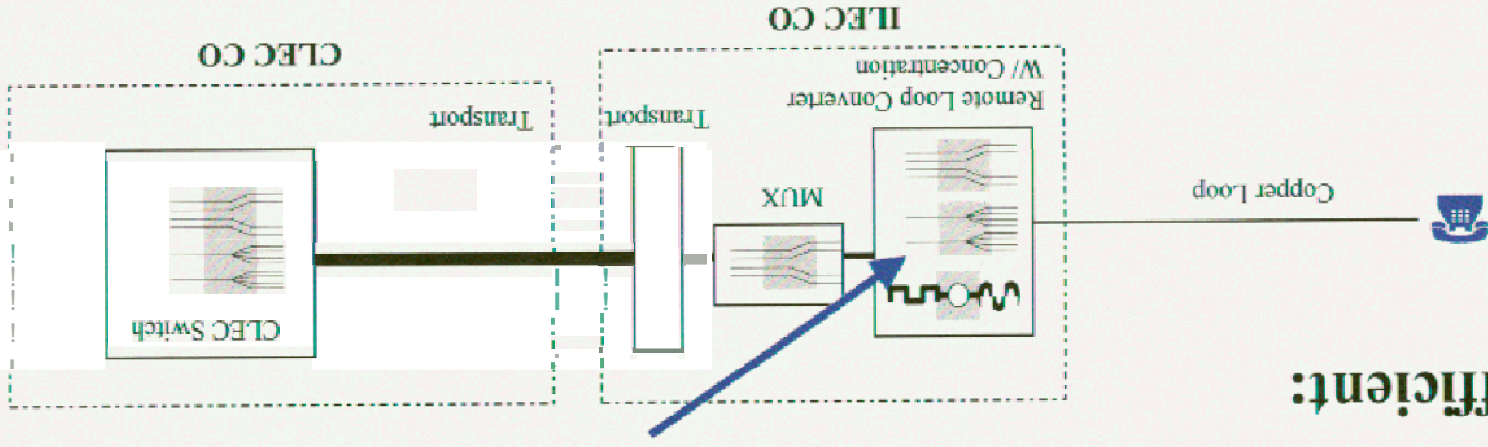


*Efficient voice networks employ both concentration and multiplexing as close to the end-user as economically feasible.*

**Inefficient: (e.g. Foreign Exchange Service)**



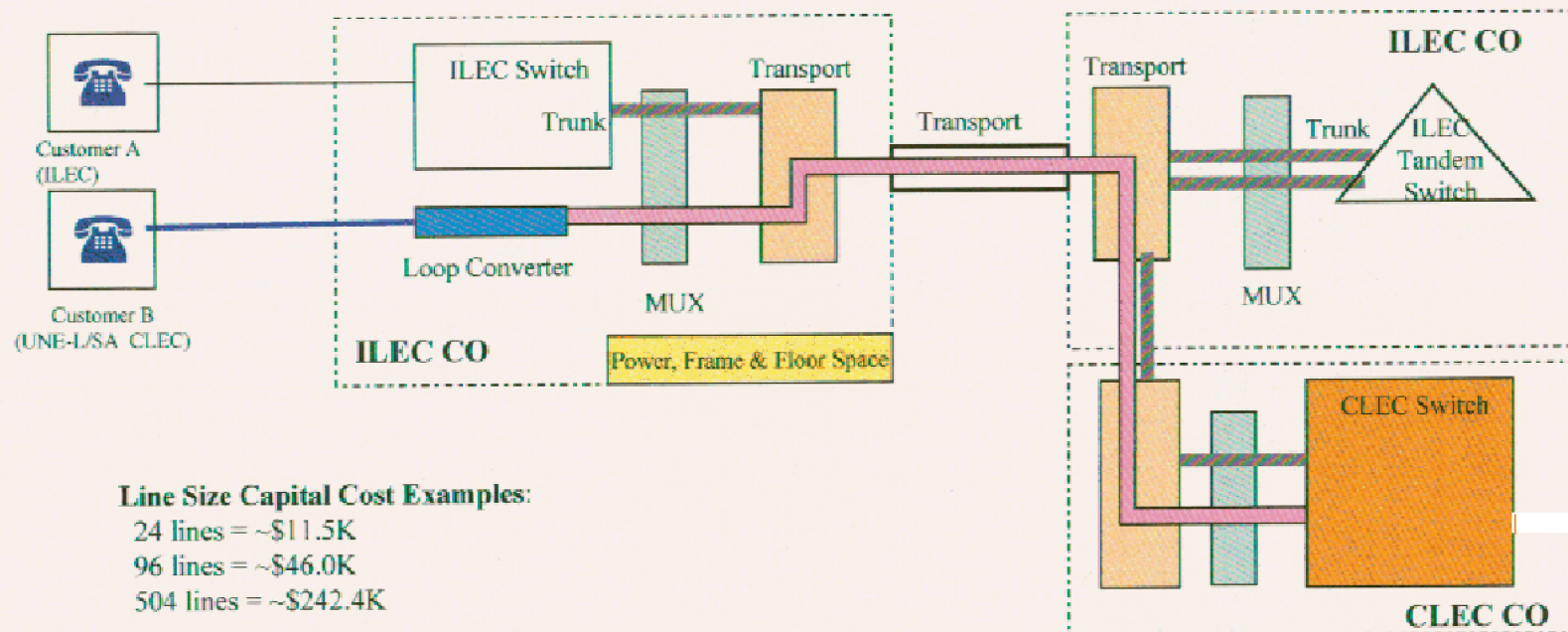
**Efficient:**





## UNE-L/Special Access

- If SBC were required to transition UNE-P lines and provide loop conversion without concentration, the estimated capital investment is approx. \$480 per line.



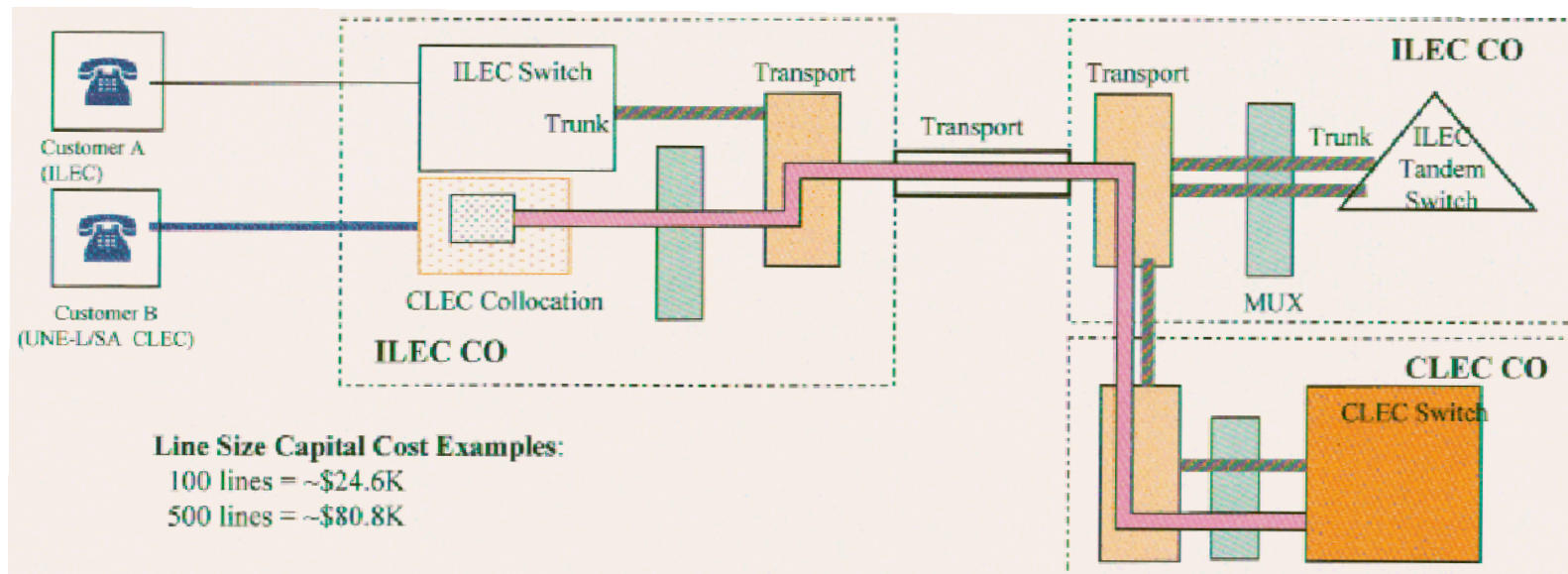
### Line Size Capital Cost Examples:

24 lines = ~\$11.5K  
 96 lines = ~\$46.0K  
 504 lines = ~\$242.4K

Network Component	Capital per Line	
	Model	2-Office Sample
Loop Converter	\$400	\$484
MUX	\$48	\$8
Transport Link	\$31	\$5
Inter-Office Trunk Port + Facility Augment (est.)	not modeled	not modeled
Power, Frame & Floor Space	not modeled	\$52
<b>Total</b>	<b>\$479</b>	<b>\$549</b>

## UNE-L/Special Access with Concentration

- CLEC-deployed, collocated, concentration offers greater efficiencies and reduced cost.



### Line Size Capital Cost Examples:

100 lines = ~\$24.6K

500 lines = ~\$80.8K

Capital per Line	
Network Component	Virtual Collo Model
CLEC Equip (100 lines)	\$150
Collocation (Physical & Virtual vary by state)	\$75
MUX	\$12
Transport Link	\$9
Inter-Office Trunk Port + Facility Augment	NA
<b>Total</b>	<b>\$246</b>

## ***Conclusions***

- **It's reasonable, efficient and practical for CLECs to purchase loop concentration equipment for use in their network.**
- **If i n ILEC should deploy new equipment to support UNE-L/SA, then the ILEC should be able to recover costs up-front.**